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Dear Cooperator:

All Soil Conservation Districts of S. D. Make Progress, Report Shows

Below is a statistical report of the progress of the five soil conservation districts which were in operation in South Dakota prior to January 1, 1940. This report includes only the agreements on which all work has been completed. No credit is given in this report for work which has been planned but not finished to date.

Number of Cooperative Agreements	476
Acres covered by these agreements	209,928
Contour cultivation established to date	876 Acres
Contour furrows and ridges	415 Acres
Controlled grazing	121,767 Acres
Planting of new permanent pastures	3,662 Acres
Planting in old pastures	704 Acres
Planting of permanent hay	2,680 Acres
Planting of woody windbreaks	1,269 Acres
Contour strip cropping	1,501 Acres
Strip cropping--wind strip	15,661 Acres
Diversion dams	8
Ditches and percolating structures	2,965 Rods
Cultivated land under protective cover	8,475 Acres
Diversions	400 Rods
Irrigation systems (1)	20 Acres
Retention structures	76
Acre feet of retention structures	512
Cubic Yards of retention structures	48,618
Terracing	80 Acres

The surveys which have been conducted in these districts are listed below:

Reconnaissance	682,384 A
Soils	771,368 A
Vegetative	548,858 A
BAE Economics	392,624 A
Land ownership	470,575 A
Land occupancy	295,575 A
Range	153,532 A
Aerial photography	175,000 A

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Demonstration Method One of Strongest Teaching Tools Extension Service Uses

The demonstration method is still one of the strongest tools employed by the Extension Service. The demonstration of soil conservation methods is one of the newer enterprises which has been accepted and used by the South Dakota Extension Service. In cooperation with the Soil Conservation Service Extension demonstration farms have been established in a number of South Dakota counties for the purpose of showing and evaluating conservation measures.

A number of demonstration farms were newly established in the northeastern part of the state last fall, and many acres of land in this area will be farmed on the contour for the first time when planted this spring. A number of applications for Extension demonstration farms have been received from counties scattered over the state. Five such applications have come in from Gregory County. It is anticipated that there will be at least one of these demonstration farms in every county by the end of 1940.

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The soils survey is now nearly completed on the 180,000 acres originally included in the American Creek Soil Conservation District.

Additional Pasture Acreage Allows Brule Man to Defer Grazing on Poor Pasture

J. J. Havlik, Brule County farmer living north of Kimball, increased his pasture acreage in 1939 and plans further increases in 1940. The additional pasture rented by Mr. Havlik allowed him to defer a pasture that was below average in condition. The 'rest' in 1939 made a remarkable improvement in the density and volume of grass and gave Mr. Havlik a good fall and winter feeding ground. In figuring his actual cost, Mr. Havlik found the additional 160 acres of pasture cost him less than 8 cents per acre. The soil building allowance earned by deferred grazing and other soil building practices through increasing his unit, accounts for the low rental cost. Mr. Havlik plans to rent an additional 320 acres in 1940, of which 250 acres will be pasture and hay meadow. This will allow an increase in livestock and also allow Mr. Havlik to control the grazing on his pasture to such an extent that each year he will allow a period of rest for each pasture, and leave a percentage of grass to go to seed, to collect winter snow, to hold early spring rains, add organic matter to the soil and protect the soil against wind and water erosion.

Mr. Havlik believes that overgrazing during dry seasons had a tendency to weaken the roots of plants, lowering normal production or even destroying the plant.

Mr. Havlik, through the cooperation of the Brule-Buffalo Soil Conservation District, is practicing contour farming to conserve moisture, and strip cropping as insurance against wind erosion. Contour tillage of small grain in 1939 gave Mr. Havlik a 10 per cent yield increase.

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Sixth Soil Conservation District Set Up : Can Grow Trees in Dry Years
In Sanborn County; Will Use CCC Labor

The sixth soil conservation district office in South Dakota has been set up in Sanborn County. Technicians of the Soil Conservation Service with Paul Underwood in charge are setting up their office in Woonsocket to cooperate with the supervisors of the Silver Creek Soil Conservation District.

Fred Larson, county extension agent and secretary of the board of supervisors, arranged a series of educational meetings to be held in the district to acquaint individual farmers and land owners with the assistance available. These meetings were well attended and members of the board of supervisors and employees of the Soil Conservation Service and the Forest Service assisted in explaining the District's Program.

Approval has also been secured for the use of CCC labor in this District. The camp located at Huron will be able to work in the greater part of the district from their present location. Plans are also underway to establish a side camp at Woonsocket this summer if the need exists and proper arrangements can be made. A soils technician and a conservationist will work with Mr. Underwood in assisting the supervisors to effectuate the work planned.

Numerous applications for cooperation have already been received by the district supervisors. It is anticipated that many agreements will be worked out in time for spring planting. These first farms will serve as demonstrations throughout the area.

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Limited grazing and contour farming have been found to be effective practices to increase yields on the heavier soils.

A tree strip planted on Oscar A. Meyer's farm this spring by Camp SCS-4, Huron, shows a remarkable growth and is superior to many in the area. When Mr. Meyers was asked what he attributed the fine condition and growth of trees to he said, "I believe I can grow trees even during the driest years. The main thing is to keep the ground stirred up and free from weeds. I also believe that machine planting is better than hand planting because the trees are placed in the ground more firmly and have less chance to dry out before they start growing. This summer I cultivated the trees seven times and my boys hoed the weeds between the trees three times. I know that I will have a fine shelterbelt in a very short time, and I think every farm should have some trees because they are easy to grow if they are given good care to start out with."

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Proposed Dugout Results in a Spring

In the spring of 1939, Camp SCS-4 at Huron, South Dakota started the construction of a stock-water dugout on the Frank L. Curtis farm six miles west of Virgil. The dugout was located in the channel bed of an intermittent tributary of Sand Creek. This location would allow the dugout to fill in the spring and have an adequate supply of water for the livestock for the grazing season. This dugout consists of a trench approximately 100 feet by 40 feet and 8 feet deep with sloping ends for cattle approaches.

When the dugout was nearly completed, a spring was unexpectedly opened and water rose from beneath the dugout, filling it to a depth of four feet. This depth was maintained throughout the summer, making it unnecessary to depend upon flood waters.

Mr. Curtis says, "This was the first dry season that the pasture near the farmstead wasn't badly over-grazed. Last spring the cattle grazed the bottomland near the dugout where the grass could stand heavy grazing, thereby giving the grass near the farmstead a chance to get a start."

Properly located water supplies are important contributions to efficiently distributed grazing.

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Interest in Soil Conservation Work
Grows; Many Requests for New Districts

Interest in soil conservation districts throughout the state of South Dakota is largely increasing through discussion with farmer groups, through letters received and through general oral requests. Much interest in new districts has been manifested.

A group of farmers and ranchers in Pennington County had a meeting in February to discuss the possibility of a district in that area. The need in that vicinity is for technical assistance in engineering practices to conserve water. This group anticipate presenting their problem to the County Land Use Planning Committee and if favorable action is obtained they will proceed with the necessary steps in setting up a district.

Spontaneous reaction from a soil conservation district in North Dakota just across the state line has brought about a request for a district in South Dakota in the northwest part of Corson County. A meeting was conducted at Morristown to explain the possibility of a district and the procedures for setting up one. At this time local planning committees were organized to study the local problems and recommend a solution to the county committee.

The district in North Dakota has been able to accomplish many good results, not only in soil conservation but also in setting up water spreading devices and doing flood irrigation, guidance in setting up proper-sized units, that the action across the state line was only the natural one to expect.

The land purchase area, which comprises about 200,000 acres in part of Lyman, Jones, and Stanley Counties, has a local committee of land owners established to study the management problem. This group have studied for some time the possibility of setting up a grazing association. They are now making a detailed study of the possibilities of a soil conservation district for this area. As soon as the committee comes to a definite decision, action will be instigated to assist them in carrying out the type of management of this area that they desire.

Considerable interest has been shown in the southeast part of Todd County for the organization of a district in that vicinity. Land occupiers of approximately half a township of this area attached themselves to a district in Tripp County about a year ago. The area they wish to include in a district at this time may be too large for attachment to the old district and may necessitate their setting up a new one. A study of this situation is being made at the present time and the local people working through Wesley Henke, county extension agent, will soon announce their decision.

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Diverting water from draws or streams and distributing it over fields of suitable soil is one of the most popular practices on the Tri-County Soil Conservation District.

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Land Use Planning Committee Wants District Among Union County Hills

The land use planning committee in Union County has approved the organization of a soil conservation district in the hilly area of that county. The working of a soil conservation district was explained to this committee by Ross D. Davies, State Coordinator of the Soil Conservation Service, in a special meeting held the latter part of January. Considerable local interest had been shown prior to this time and the committee was called together to consider this problem as a result of local interest.

A unanimous vote of the land use planning committee showed their approval of this project. A temporary committee was set up to assist in the educational and organizational work which is necessary before a district may be established.

Information gathered by the Union County planning committee will be very valuable in establishing the boundary of the district, in determining conservation practices, and recommending possible solutions to the problem. This is the first request for a district that has been received from a county doing intensive or unified planning. It is anticipated that this early planning will be of unusual value in working out a good district program.

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Grazing Records Used to Assist Ranchers

Accurate records of actual stocking of pastures over a long period, covering years of varying climatic conditions, will aid stockmen in determining the amount of stock that can be grazed, on the average, year after year, without impairing the forage cover. Records of this type will also assist in determining the amount of rental or

taxes they can afford to pay for the land involved, according to Arthur L. Holding, Range Examiner of the Tri-County Soil Conservation District.

With this in mind, several stockmen cooperating with the district kept actual use grazing records during the past year. Ranges were grazed at different intensity rates, depending upon stock numbers and size of unit, varying from 40 acres to 100 acres per animal unit on a year-long basis. In practically all cases satisfactory cover remained at the end of the grazing season to maintain the stand, hold snow, and prevent accelerated water run-off. The records showed that as a rule 40 acres per animal unit on a 12-months grazing basis seemed to be the maximum stocking intensity for the area under climatic conditions such as ensued during the past year, stated Mr. Holding.

If conservation of range land is to be accomplished it is imperative that stockmen recognize and respect proper utilization of grass land at all times, added Holding.

It is hoped more such records can be obtained in the future to be used as a basis of good land use planning for the area.

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Clay County Forms Eighth South Dakota Soil Conservation District

The eighth soil conservation district in South Dakota was approved by a vote of local people on February 12, 1940. This district, which is known as the Clay County Soil Conservation District, is now ready to elect supervisors and complete the district's program and plan of work.

The total area of this district is 115,200 acres representing five townships in the northern part of the county.

The total number of acres reported in the vote was 83,686.

Of the 601 landowners, there were 438 who cast a ballot. Of this number, 365 cast favorable ballots and there were 73 against the organization of the district. Bringing these figures down to a percentage basis, 73 percent of the land was represented in the vote and 83 percent of the votes cast were favorable.

In the first seven referenda held in the state the lowest percentage of total land represented in the vote has been 72 percent and the highest 80 percent. The lowest percent of favorable vote ever received at this time was 79 percent, and the highest was 95.6

The district will now complete its plan of work and submit it to the State Soil Conservation Committee. If the program and plan receive the approval of the committee and Director of Extension, it will be sent to Washington. If it receives favorable consideration there, assistance of the Department of Agriculture will be made available to the Board of Supervisors.

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Supervisors Chosen for Emanuel-Choteau Creek District; Fenn Is Technician

Since the last issue of the Dakota Zephyr, the Emanuel-Choteau Creek District land occupiers have elected the following supervisors:

Wm. Raabe, Tyndall
Rudolph Engel, Avon
W. J. Hornstra, Springfield

These supervisors will work with Maurice P. Babcock and Ed Dwight who are the appointed members of this governing body.

Ed Dwight has been elected chairman of the group, Mr. Hornstra, vice-chairman, and Kirk T. Mears, county ex-

tension agent, secretary. This group of supervisors have taken advantage of a new regulation with the Department of Agriculture which makes it possible for them to receive technical help prior to Washington's approval of their district work plan.

The board of supervisors officially requested this technical help in January, and on the 15th of February, B. R. Fenn, who has been the District Conservationist at the Tri-County District for almost two years, was assigned to the newly created Emanuel-Choteau Creek area.

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Water Facilities Program Makes Progress

The Water Facilities Program in South Dakota has been concentrated the past few months in Perkins County. An area known as the Rabbit and Thunder Butte Creek was approved for work and field operations began on November 14. An educational program had previously been conducted by Wm. Spurling, Perkins county agent, and 26 applications were on file in his office when the work started.

Twenty-two cooperative agreements have actually been worked out by the Soil Conservation Service technicians and seven loans totalling \$2,800.00 have been made. The agreements completed have made the following land use improvements on the ranches involved:

Contour cultivation	190 Acres
Controlled grazing	42,783 Acres
Irrigation systems	281 Acres
Grass plantings	688 Acres
Approved rotations	4,707 Acres
Spring developments	2
Dams and reservoirs	34
Strip cropping	3,508 Acres
Water spreading	757 Acres
Well development	7

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50 Million Acres in U. S. Destroyed
By Erosion; Specific Examples Given

It is estimated that in the United States about 50 million acres have already been destroyed by erosion and another 50 million acres are in almost as bad shape. An additional 100 million acres have been seriously injured and erosion has begun on another 100 million. We realize these figures are rather hazy and perhaps not too interesting, so in order to bring the problem down to local facts, we are going to give some specific illustrations in South Dakota.

Bryson Monfore of Bon Homme County had the following to say about erosion: "There is a 20-acre field on my place that I could easily cross in 1927. In 1930 three gullies had washed the full length of the field. Two additional gullies started the following year. These gullies now are as large as 14 feet across the top and 10 feet deep and run 200 rods into the field. There are three more that will be just as bad if they are not checked."

William Poelstra of Springfield, South Dakota, has this to say: "When I was a boy we used to sit on the bank of the creek and fish almost anywhere. It was all the way from 10 to 12 feet deep. Today there is no creek bed left. The old creek bed is higher than the land on both sides. A bridge used to cross the creek on the highway and we used to drive under the bridge and the top would be 'way above my head. About a year or so ago this bridge had to be raised because the bottom of the bridge lay in the creek bed. They built a new bridge raising it about 13 feet."

Emil Diroshek, of Tabor, makes the following statement regarding erosion: "When I was a small boy there were no gullies. The binder went right across the field and now the gullies have become so deep that we have to cut the field in three pieces. The gullies are

from five to eight feet deep. Then in a small three- or four-acre meadow, three or four feet of soil has been deposited and the meadow is completely destroyed."

Axel Aalberg, of Clay County, relates the following experience: "Rain on the low land on my place caused much water erosion. I have about 60 acres that blows and the drainage there goes down the creek and keeps on going. It seems like the good soil from up above goes down there also, because there has been deposited between 25 and 30 inches of topsoil on the bottoms, and only about three inches remain on the slopes."

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Excellent Care Gives Claremont Man
Eight-Foot Trees in Four Months

Homer Cutler, Claremont, planted two primary shelterbelts in the spring of 1939. This shelterbelt, and ninety miles of other belts, were planted by the Forest Service cooperating with the District Supervisors in the shelterbelt program. Mr. Cutler has given his 14 acres of trees excellent care during the summer.

In the latter part of August he wrote the Brown-Marshall District Office stating, "I have just been checking my shelterbelt, and believe it or not, I have trees that measure eight feet and two inches in height. They have made seven feet and one inch growth. Most of them are six to eight feet tall. I think they have been planted about four months."

These cottonwood trees were planted as twelve-inch seedlings and in the short space of four months have made this tremendous growth by the latter part of August. Naturally there is a great deal of interest in Mr. Cutler's vicinity and he has demonstrated that trees can be grown, and grown very rapidly, if cared for properly.

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DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

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